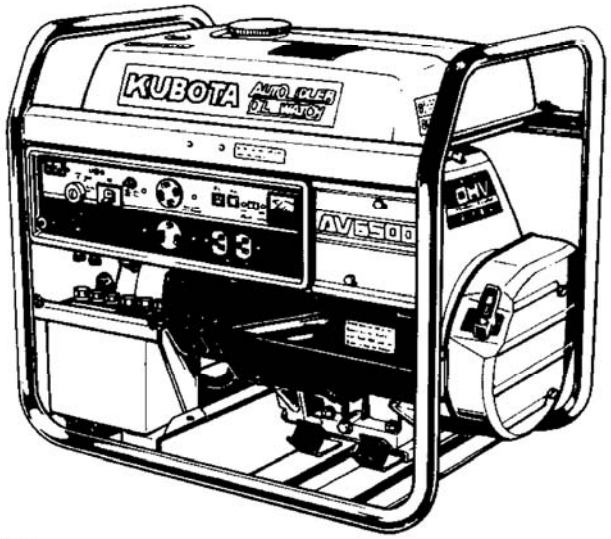
KUBOTA GENERATOR

AV5500-B
AV6500-B

OIL WATCH
AUTO IDLER



D-1698

OPERATOR'S MANUAL

READ AND SAVE THIS BOOK

This product is subject to change for the purpose of improvement.

Kubota

FOREWORD

Thank you for purchasing a KUBOTA generator.
This operator's manual shows correct handling and maintenance procedures.
Read this manual carefully to obtain the safest, longest, and most productive performance from your KUBOTA generator.

Please note that certain items in this manual may become obsolete due to our program of constant design improvement. Please check with your dealer for further information.

⚠ SAFETY ALERT SYMBOL

This is the industry's "Safety Alert Symbol". This symbol is used to call your attention to items or operations that could be dangerous to you or other persons using this equipment. It is essential that you read and follow these instructions carefully before you attempt to use this unit.

⚠ WARNING

Before the generator can be connected to a building's electrical system, a licensed electrician must install an isolation (transfer) switch in the building's main fuse box. This switch is the connection point for generator power and allows selection of generator or main line power to the building. This will prevent the generator from charging the main power line (backfeeding) when the main power supply has failed or has been turned off for line repair. Backfeeding can electrocute or injure line maintenance personnel. Also, generator and building electrical system damage can occur when normal operating power returns if unit is used without an isolation switch.

⚠ SAFE OPERATION

Read and understand this OPERATOR'S MANUAL before operating the generator.
Pay special attention to all labels on the generator.

1. ELECTRICAL HANDLING

Always exercise extra caution when handling electrical equipment. Careless handling of electrical components can cause serious personal injury or property damage.

(1) Never touch electrical connections or terminals during operation.
(2) Make certain all power cables and wiring are in good condition. Bare wire or frayed insulation can cause dangerous electrical shock and injury.
(3) Do not use the generator in damp or wet conditions. Handling terminals and cables with wet hands can result in personal injury.
(4) Always shut off the engine and allow to cool to touch before cleaning. Use water sparingly when cleaning the outside of the machine, and make sure water does not splash onto the electrical system.

2. EXHAUST GAS

Never run the generator in an enclosed area. Carbon monoxide is colorless, odorless, and deadly.

(1) Never operate the generator where air circulation is incomplete or where exhaust gas can accumulate.
(2) Never direct the exhaust pipe at persons or buildings.

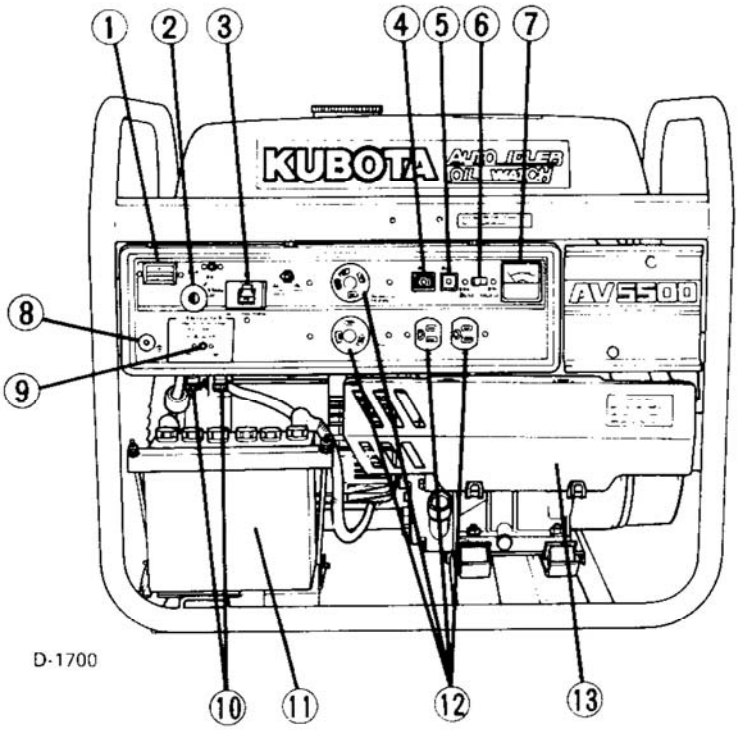
3. FIRE PREVENTION

(1) Do not smoke or allow sparks near the generator while refueling.
(2) Keep flammable materials such as straw, paper, and sawdust, or dangerous materials such as oils and explosives away from the machine.
(3) Operate the generator on a firm and level surface. Do not tilt or move the generator while it is running since this may cause fuel spillage.
(4) Always keep the generator at least three feet away from buildings and other facilities.
(5) When storing, do not cover the generator until the engine has cooled completely.

4. ADDITIONAL PRECAUTIONS

(1) Always stop the engine and allow it to cool before conducting inspection, maintenance, or cleaning procedure.
(2) If any unusual noises, smells, or vibrations are noticed during operation, shut off the engine immediately, and determine the cause. Repair before restarting.
(3) Know how to stop the generator quickly. Be sure that you understand how to operate all of the controls. Do not permit anyone to operate the generator without proper instruction.
(4) Keep children and pets away from the generator at all times.

NOMENCLATURE



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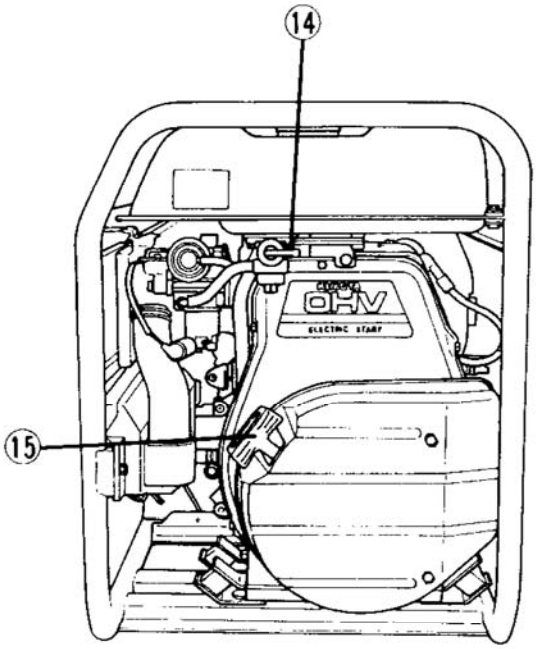

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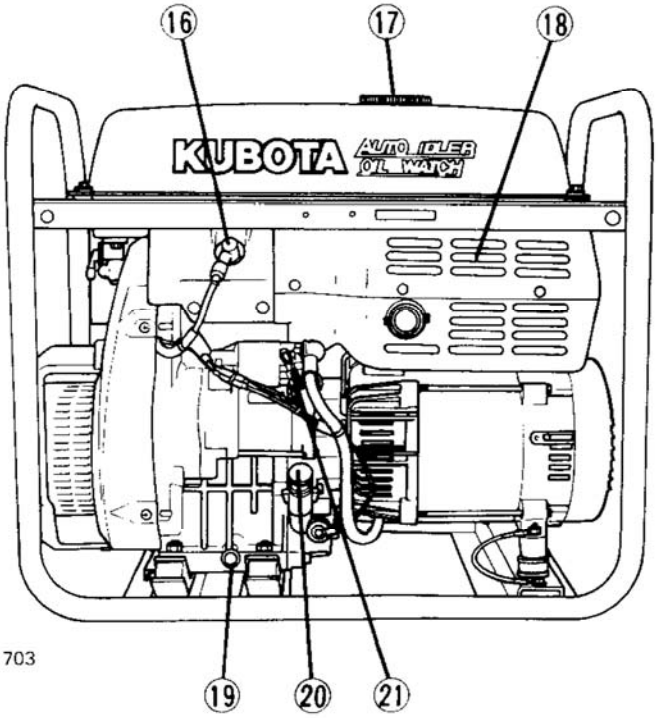

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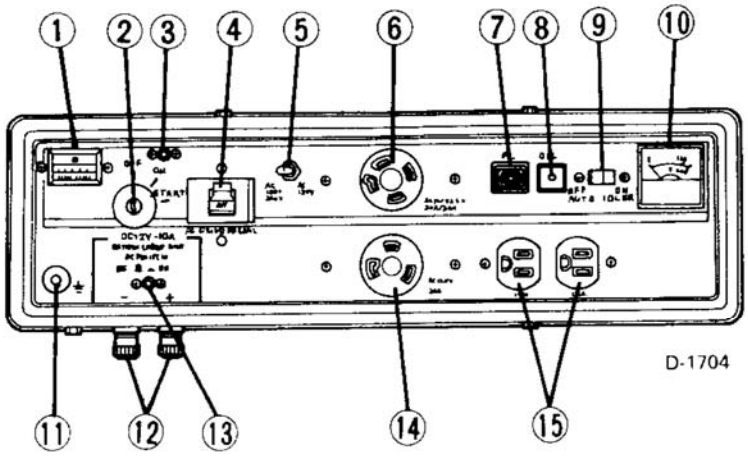
① HOUR METER
② KEY SWITCH
③ AC CIRCUIT BREAKER
④ PILOT LAMP
⑤ OIL WATCH LAMP
⑥ AUTO IDLER SWITCH
⑦ VOLTMETER
⑧ GROUND TERMINAL
⑨ DC CIRCUIT PROTECTOR
⑩ DC TERMINALS
⑪ BATTERY
⑫ AC RECEPTACLES
⑬ AIR CLEANER
⑭ FUEL COCK
⑮ RECOIL STARTER GRIP
⑯ SPARK PLUG
⑰ FUEL TANK CAP
⑱ MUFFLER
⑲ ENGINE OIL DRAIN PLUG
⑳ ENGINE OIL FILLER CAP/DIPSTICK
㉑ FUSIBLE LINK

CONTROL PANELS



① HOUR METER
② KEY SWITCH
③ DC PROTECTOR-CHARGE COIL
④ AC CIRCUIT BREAKER
⑤ VOLTAGE SELECTOR SWITCH
⑥ AC RECEPTACLES L14-20R (AV5500)
L14-30R (AV6500)
⑦ PILOT LAMP
⑧ OIL WATCH LAMP
⑨ AUTO IDLER SWITCH
⑩ VOLTMETER
⑪ GROUND TERMINAL
⑫ DC TERMINALS
⑬ DC CIRCUIT PROTECTOR
⑭ AC RECEPTACLES L5-30R
⑮ AC RECEPTACLES 5-15R

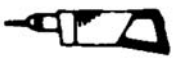
CAPACITY OF ELECTRICAL DEVICES POSSIBLE

■ Application range

You can operate the AV series generators in the following range.

(1) For lighting and heaters, a load up to rated output can be handled.

(2) When using power tools and machines which require a high starting current, a generator of a capacity about 2 to 5 times the motor is needed, depending on the model and wattage of the device. Refer to the table below.

Typical Apparatus			
AV5500-B	4800W	3840W	1500W or 1 1/4 h.p. code M
AV6500-B	5400W	4320W	1750W or 1 1/2 h.p. code M
Remark	Light and heaters Power factor =1.0	Commutator motor Power factor =0.8 to 0.95	Induction motor Power factor=0.4 to 0.75

BEFORE OPERATION

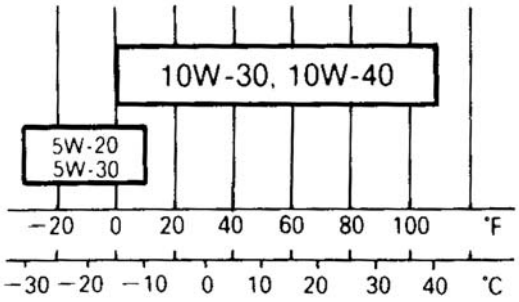
1 Lubrication:

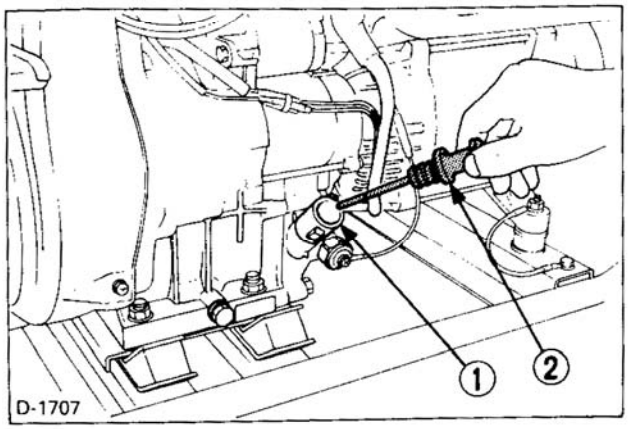
Add clean engine oil up to the upper line on the oil dipstick.

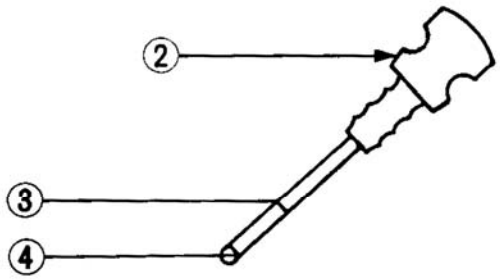
IMPORTANT:

The engine is shipped dry. Be sure to add oil before operation.

AV5500-B	AV6500-B
1.17qt.	







① Fill port
② Dipstick/Fill port cap
③ Upper limit
④ Lower limit

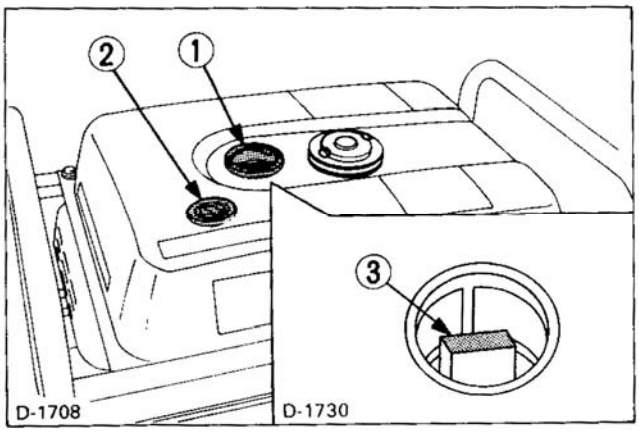
2 Fuel:

CAUTION:

(1) Allow engine and muffler to cool prior to refueling wipe up spilled fuel immediately.

(2) If the fuel level exceeds upper level, fuel may overflow when the generator is inclined or transported, thus causing a danger of fire.

Fill fuel tank with unleaded gasoline. Be careful not to overfill the tank or spill fuel when refueling. Close fuel cap securely.



① Fill port
② Fuel level gauge
③ Upper level

3 Battery

(1) The AV5500-B/AV6500-B should use a battery of 12V/24AH capacity or more. (Cold cranking performance should be at least 200A. Reserve capacity should be at least 34 minutes.)

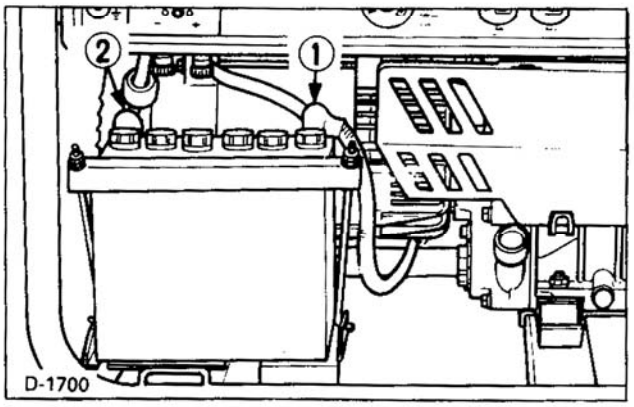
(2) Firmly secure the battery to the battery tray.

(3) First connect the positive wire ① to positive (+) terminal and then connect the negative wire ② to nagative (−) terminal.

CAUTION:
Do not reverse polarity of the battery wires. This will cause charging system damages.

(4) Apply grease to the battery terminals sparingly to protect against corrosion.

CAUTION:
Never attempt to disconnect battery wires during operation.



① Positive wire
② Negative wire

DC Protector, Charge-Coil

■ Operation

Charge-Coil DC Protector should always be on.

button ○ Tripped: The button will pop out and circuit is off.

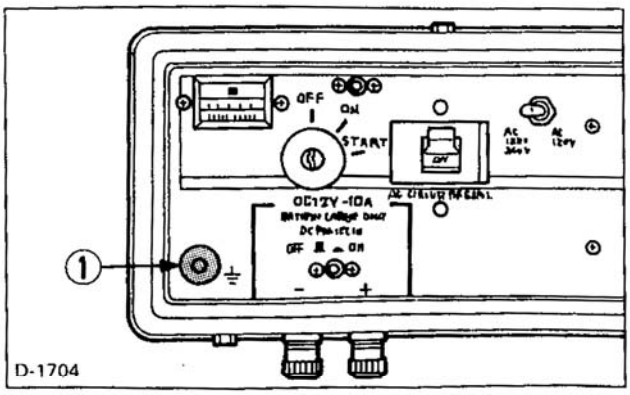
OFF ○ Reset : Allow to cool for at least 10 seconds and push in to reset.

ON

Should protector trip, determine cause and correct the problem before resetting.

4

A grounding terminal is provided on the control panel of the generator for proper grounding depending on local, state, or national OSHA requirements.



① Ground terminal

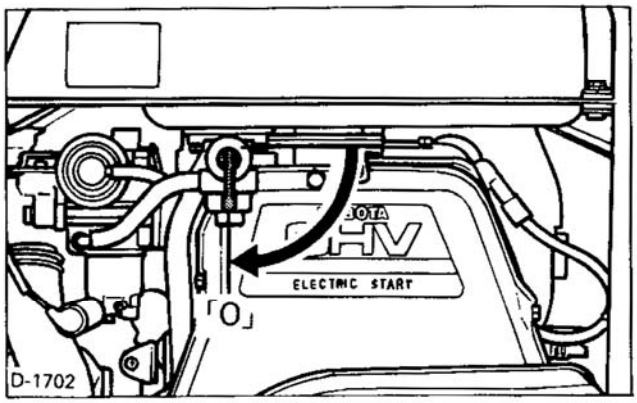
OPERATING THE GENERATOR

CAUTION:

(1) Always turn OFF the circuit breaker before starting the engine.
(2) Turn OFF all switches for the electrical devices.
(3) Never touch electrical connections or terminals during operation.
(4) Position voltage selector switch to desired output before starting the engine.

1 STARTING

(1) Open the fuel cock.



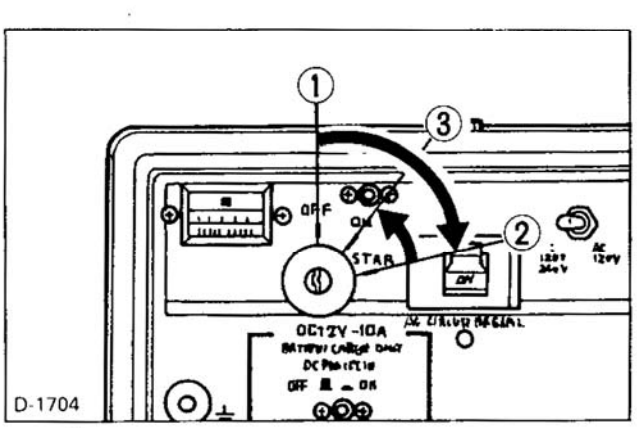
「O」 "OPEN"

(2) **[Electric start]**

Turning the key to START activates the engine's starter. Release the key after engine starts to allow the key to return to ON. Do not run the starter motor continuously for more than 10 seconds at a time, or it may damage the starter. If the engine fails to start, wait 30 seconds and try again.

[Manual start]

Set the engine switch "ON" position. Pull the recoil sharply and briskly.



① "OFF" ② "START" ③ "ON"

■ In cold weather

In cold weather, if the engine is difficult to start, turn OFF the idle control switch.

CAUTION:

(1) Check the voltage.
(2) When there is an overload or short circuit in the wiring, the circuit breaker switch turns OFF. In this case, eliminate the cause and then turn ON the switch again.

2 ADDING LOADS

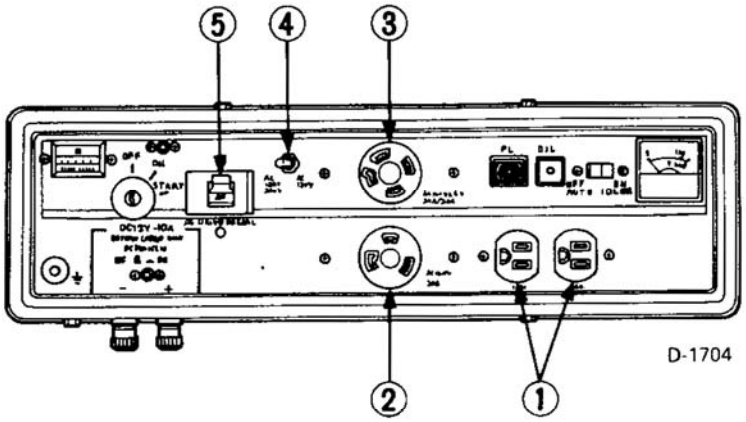
Follow the appropriate procedure for either AC loads or DC loads.

CAUTION:
Never exceed the current rating identified for each receptacle. Never exceed the generator set maximum load. Overloading the generator makes the circuit breaker switch off. Frequent or repeated overloads will shorten the service life of the generator.

■ Adding AC Loads

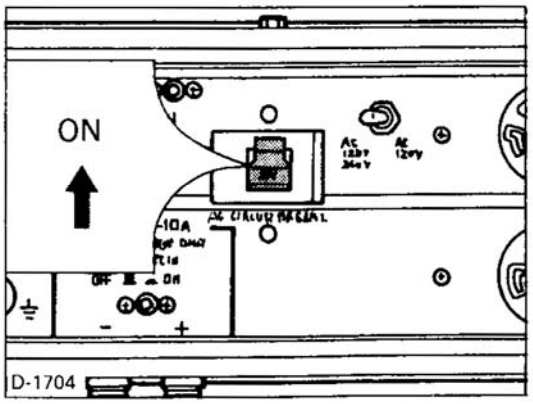
(1) Insert plug into receptacle.

①	5-15R	120V
②	L5-30R	120V
③	L14-20R (AV5500)	120V/240V
	L14-30R (AV6500)	120V/240V
④	Voltage selector switch	
⑤	Circuit breaker	



CAUTION:
Position voltage selector switch to desired output.
Do not reposition switch while the generator is running.

(2) Switch on the AC circuit breaker.



■ Adding DC Loads

CAUTION:

(1) Batteries produce flammable hydrogen gas. Do not smoke or expose battery to sparks or open flame. Charge battery only in well ventilated area. Connect charging leads to battery first and then to generator. Do not allow lead ends to touch together and make sparks. Personal injury or property damage could result.

(2) Ensure that proper polarity is observed at both ends of charging leads. Red to positive, black to negative. Personal injury or property damage could result.

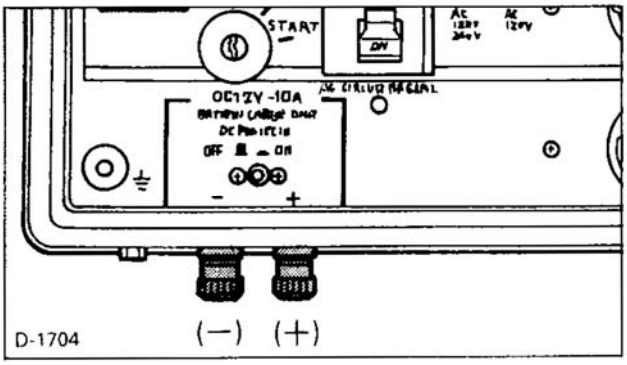
(3) Attempting to start an engine with the generator connected to the battery may overload and damage the generator.

NOTE:

The D.C. terminals may be used for charging 12 volt automotive-type batteries while simultaneously using A.C. power.

The D.C. protector switches off automatically when the load exceeds the rated output.

(1) Connect the red charging lead to the battery positive terminal and the black charging lead to the battery negative terminal. Connect the other end of the red charging lead to the generator red terminal, and the other end of the black charging lead to the generator black terminal.



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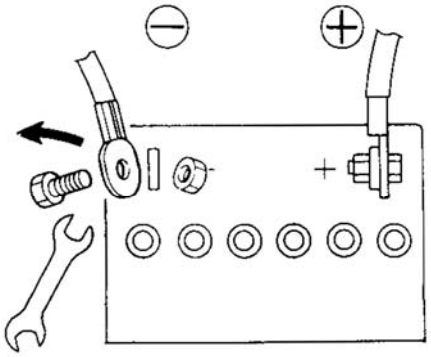
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3 STOPPING

(1) Turn off the circuit breaker.

(2) Set the engine switch to "OFF" position after operating unloaded for 2 to 3 minutes.

(3) Close the fuel cock.

(4) Ensure that fuel cock is in closed position when transporting generator set in vehicles.

LONG-TERM STORAGE

Perform the following steps to maintain the generator in good condition.

1. Drain gasoline from the fuel tank.
2. Drain gasoline from the carburetor float case.
3. Clean the fuel cock.
4. Change oil in the crankcase.
5. Pull the recoil starter until heavy resistance is felt. This action places the cylinder in the compression stroke.
6. Cover the generator and store in dry, dust-free place.

TROUBLESHOOTING

CAUTION:

(1) Always perform any check with engine stopped except for special check in which operation is required.

(2) Do not touch electrical connections or terminals during operation.

(3) Keep your hands away from rotating parts during operation.

A. When the engine will not start:

1. Is there enough oil in the crankcase?
2. Is there enough fuel?
3. Is the fuel cock on?
4. Is there a spark at the spark plug?
5. Is gasoline reaching the carburetor?
   To check, loosen the drain screw with the fuel cock on.
6. Is battery discharged?
   or, is fusible link blown?

WARNING If any fuel is spilled, make sure the area is dry before testing the spark plug or starting the engine. Fuel vapor or spilled fuel may ignite.

B. When the engine starts but stops immediately:
   Is there enough oil in the crankcase?
   When the engine oil level is low.
   The oil watch stops engine operation before the oil level reaches an unsafe condition.

C. No electricity at the AC receptacles:

1. Is the AC circuit breaker on?
2. Check the electrical appliance or equipment, cords and plugs for any defects.

D. No electricity at the DC terminals:

1. Is the DC circuit protector on?
2. Check the electrical appliance or equipment, cords and plugs for any defects.

If you have any questions, contact your Kubota dealer.

MAINTENANCE SCHEDULE

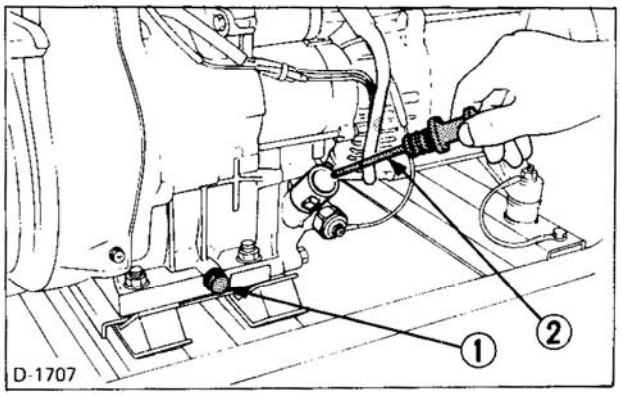
Shut off the engine before performing maintenance operations. Consult the following table for the proper maintenance schedule.

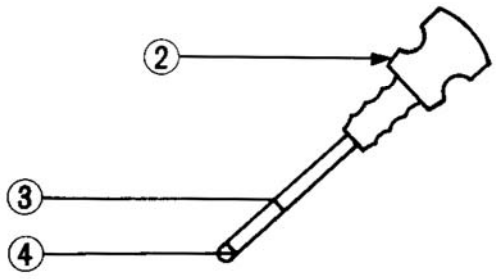
Running hours		(Every day) Every 8 hours	(Every week) Every 50 hours	Every 100 hours	(Every month) Every 200 hours	Every 500 hours
Clean generator and check for loose parts		●				
Check engine oil		●				
Change engine oil		(First 20 hours)	●			
Check the battery electrolyte level			●			
Clean air cleaner element			●			
Clean spark plug and check gap				●		
Service spark arrester				●		
Clean fuel filter					●	
Remove carbon deposits from cylinder head	leaded gasoline				●	
	unleaded gasoline					●
Clean carburetor and tank						●
Adjust intake and exhaust valves						●

Note: Refer to servicing dealer or workshop manual for carbon removal and valve adjustment procedures.

■ Changing oil

(1) Remove the drain plug to drain the engine oil. Drain the oil while the engine is still warm so that the oil can flow out completely.
(2) Replace drain plug.
(3) Add clean engine oil up to the upper line on the oil dipstick.





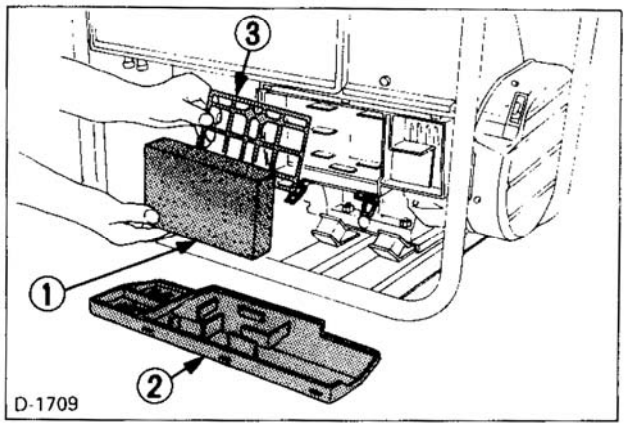
① Drain plug ② Dipstick/Fill port cap
③ Upper limit ④ Lower limit

MAINTENANCE

■ Air cleaner element

CAUTION:
Never clean the airfilter case and element with gasoline or low flash point solvent. Personal injury or property damage may result.

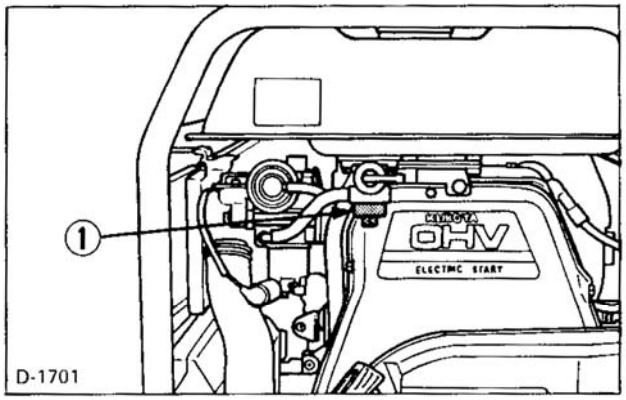
1. Loosen the clamps and remove the case cover and element.
2. Clean the case and element with high flash point solvent.
3. Squeeze out all solvent from element and thoroughly dry case.
4. Dip element in clean engine oil and squeeze out excess oil.
5. Assemble in reverse order.



① Element ② Case cover ③ Plate

■ Fuel Filter

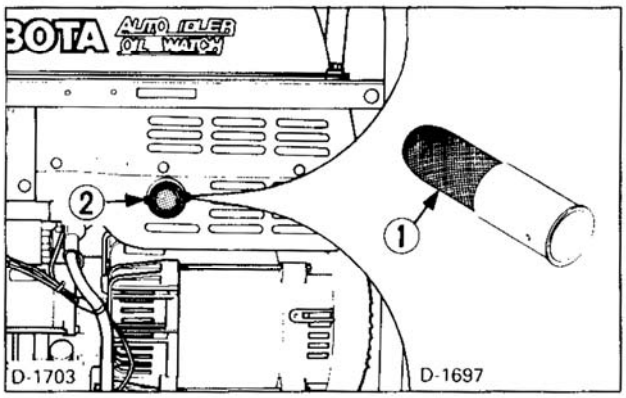
1. Turn the fuel cock closed.
2. Turn the sediment bowl off the fuel cock. Be careful not to spill gasoline.
3. Clean out any dirt and particles.
4. Re-install the sediment bowl.



① Sediment bowl

■ Screen type spark arrest muffler

The screen used on this muffler should be inspected and cleaned every 100 hours or sooner depending on conditions and deposits present.
Remove the screen and inspect for damage. If damaged replace. To clean, lightly tap the screen and clean any carbon and deposits with a wire brush. ⚠ **Wear eye protection.** Also use solvent if necessary. Replace and attach securely with a screw.



① Screen ② Screw

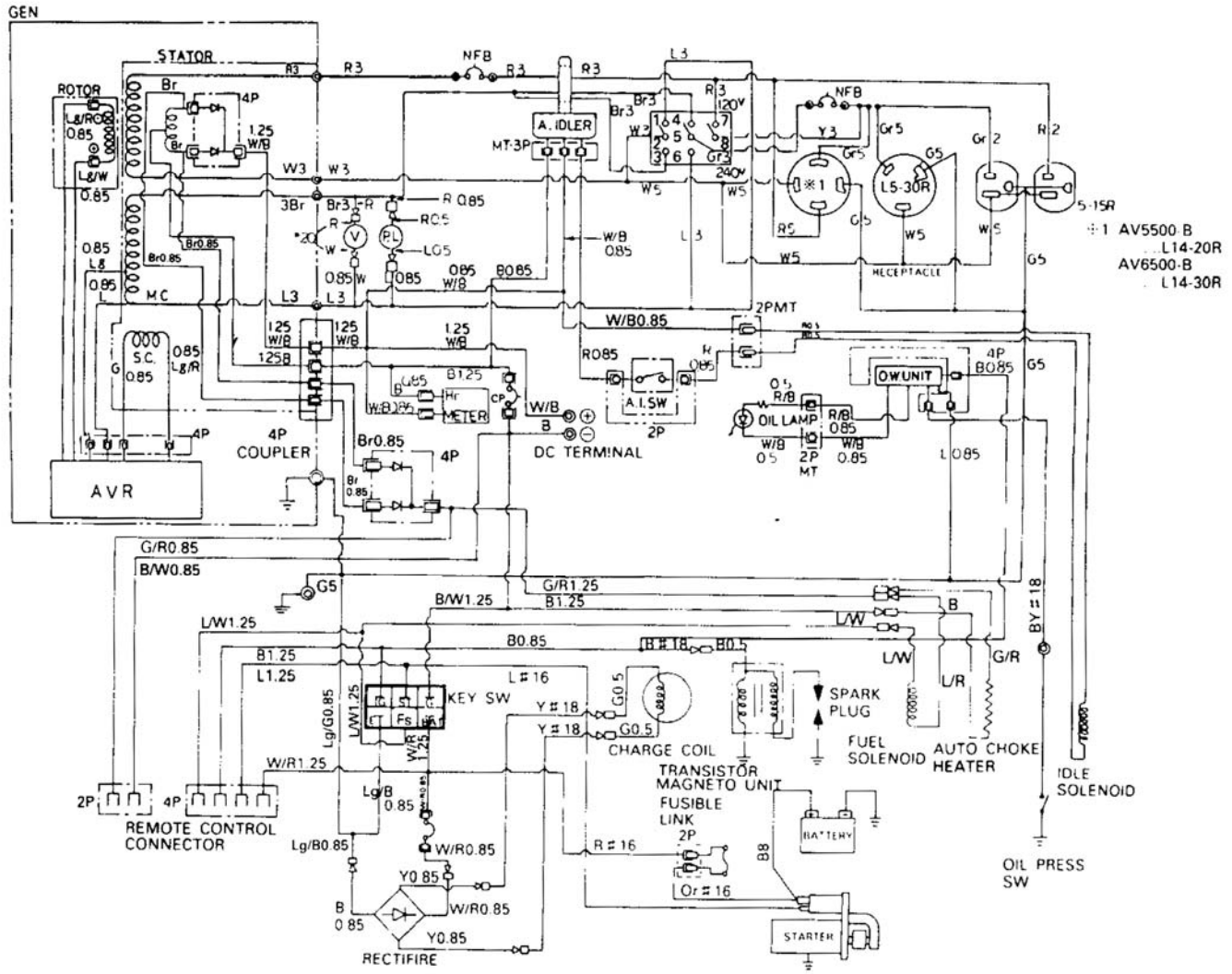
■ Spark plug

Recommended spark plug:
BPR4HS-10 (NGK)
Installation torque: 10.8 to 14.5 ft·lbs.
(1.5 to 2.0 kgf·m)

Gap: 0.0354 to 0.0394 in.
(0.9 to 1.0 mm)

WIRING DIAGRAM

AV5500-B, AV6500-B



KEY SWITCH

	IG	E	BAT	ST	FS	G
OFF	○	○			○	○
ON						
START			○	○		

Code	Wiring color	Code	Wiring color
R	Red,	W/R	Red on white
W	White	R/W	White on red
L	Blue	B/R	Red on black
Lg	Light green	Lg/R	Red on light green
Light L	Light blue	Lg/W	White on light green
B	Black	G/R	Red on green
Br	Brown	B/Y	Yellow on black
Y	Yellow	B/W	White on black
Or	Orange	L/R	Red on blue
Gr	Gray	L/W	White on blue
G	Green	Lg/B	Black on light green

SPECIFICATIONS

Model			AV5500-B	AV6500-B
Generator	Frequency		60 Hz	
	AC	Maximum output	5500W	6500W
		Rated output	4800W	5400W
		Voltage	120V / 240V	
		Rated current	40A / 20A	45A / 22.5A
		Power factor	100%	
		Over current protector	Circuit breaker	
	DC	Output	120W (Battery charge only)	
		Voltage × Current	12V × 10A	
Engine	Type		Air cooled 4 cycle OHV gasoline engine	
	Model		GH400-DG	
	Displacement		389 cu.cm.	
	Fuel		Unleaded gasoline	
	Fuel tank capacity		5.3 gals.	
	Lubricating oil capacity		1.17 qt.	
	Ignition system		Transistor control ignition	
	Spark plug		BPR4HS-10 (NGK)	
	Starting system		Electric starting / Recoil starting	
Total dry weight			196 lbs.	207 lbs.
Total dimensions (L × W × H) (in.)			26.4 × 18.5 × 22.5	
Features	Pilot lamp		○	
	AC V-meter		○	
	Fuel level gauge		○	
	Oil level warning lamp		○	
	Auto idle mechanism		○	
	Emergency / Stop mechanism		In case of abnormal oil pressure	

WARNING AND CAUTION LABELS

Refer to the following representations for labels used on the AV-series Generator.
Labels are available individually from your KUBOTA Dealer.

Code No. 18430-8722-0

⚠ WARNING

TO AVOID SERIOUS PERSONAL INJURY :
- STOP ENGINE AND ALLOW TO COOL BEFORE REFUELING.
- DO NOT OVERFILL FUEL TANK.
- WIPE UP FUEL SPILLS IMMEDIATELY.
- ELECTROCUTION CAN OCCUR IF OPERATED IN WET OR DAMP CONDITIONS.
- OPERATE ONLY IN WELL VENTILATED AREAS.

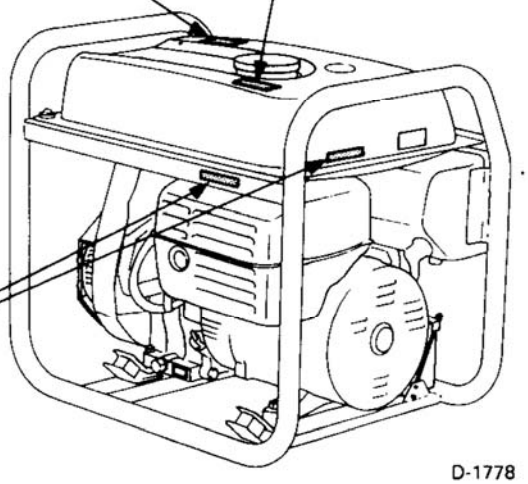
Code No. 18405-5007-0

⚠ WARNING

ELECTROCUTION OR PROPERTY DAMAGE CAN OCCUR
DO NOT CONNECT THIS GENERATOR TO ANY BUILDING'S ELECTRICAL SYSTEM UNLESS AN ISOLATION SWITCH HAS BEEN INSTALLED BY A LICENSED ELECTRICIAN. REFER TO THE INSTRUCTION MANUAL

Code No. 18430-8806-0

CAUTION	HOT EXHAUST



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PRINTED IN JAPAN 英語(U.S.A.) Code No. 18490－8911－4
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